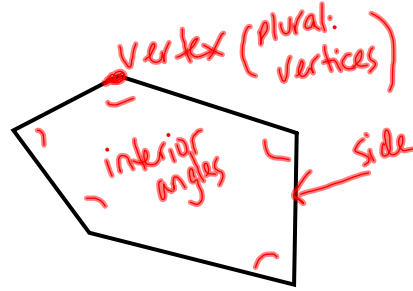


6.1 Polygons

- 2 dimensional
- straight sides (at least 3)
- Closed
- no criss-cross



Name Polygons by number of sides:

# sides	name	# sides	name
3	triangle	8	octagon
4	quadrilateral	9	nonagon
5	pentagon	10	decagon
6	hexagon	12	dodecagon
7	heptagon	n	n-gon

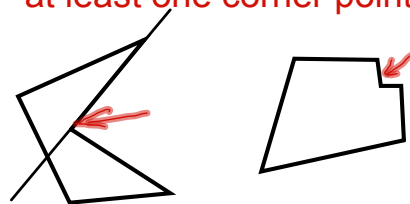
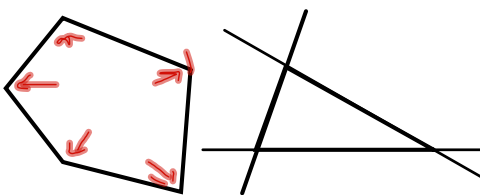
(n = # sides)

A polygon can be

Convex
all corners point out

or

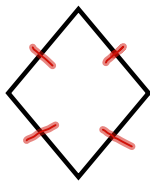
Concave (nonconvex)
at least one corner points in



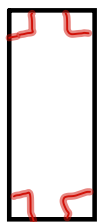
when sides are extended, they do not go inside the polygon

when sides are extended at least one goes inside the polygon.

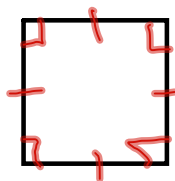
A polygon can be...



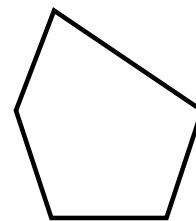
equilateral
all sides \cong



equiangular
all \angle s \cong

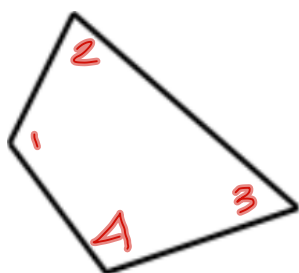


regular
both
equil. + equiang.



neither

Quadrilateral Rule: All 4 interior angles add up to 360



$$\angle 1 + \angle 2 + \angle 3 + \angle 4 = 360$$